CLAIMS

Claims 1-51 (canceled)

Claim 52 (previously presented): A method of analysis comprising the steps of:

(a) labeling molecules in a first sample with a first radioactive isotope;

(b) labeling molecules in a second sample with a second radioactive isotope that is different from said first radioactive isotope;

(c) mixing said first sample and said second sample into a mixture;

(d) separating said mixture into a plurality of groups of molecules; and,

(e) using the difference in half-life between said first radioactive isotope and said second radioactive isotope as a means to selectively quantify each isotope in each group of molecules.

Claims 53 and 54 (canceled)

Claim 55 (previously presented): A method of analysis comprising the steps of:

(a) labeling molecules in a first sample with a first radioactive isotope;

(b) labeling molecules in a second sample with a second radioactive isotope that is different from said first radioactive isotope;

(c) mixing said first sample and said second sample into a mixture;

(d) separating said mixture into a plurality of groups of molecules; and,

(e) selectively quantifying each isotope from each group of molecules wherein a screen is used to selectively block a higher proportion of radiation from one isotope.

Claims 56-78 (canceled)

Claim 79 (previously presented): The method of Claim 52 or Claim 55 further comprising the steps of:

(a) calculating the ratio of said first radioactive isotope to said second radioactive isotope in each group of molecules; and,

(b) comparing the ratios of radioactive isotopes between the groups of molecules whereby a group of molecules with a deviated ratio of radioactive isotopes can be identified.

Claim 80 (previously presented): The method of Claim 79 further comprising a step of:

isolating at least one molecule responsible for said deviated ratio of radioactive isotopes from said group of molecules with a deviated ratio of radioactive isotopes.

Claim 81 (previously presented): The method of Claim 80 further comprising a step of:

identifying the isolated molecule.

Claim 82 (previously presented): A method of isolating a difference between two samples comprising the steps of:

(a) labeling molecules in a first sample with a first radioactive isotope;

(b) labeling molecules in a second sample with a second radioactive isotope that is different from said first radioactive isotope;

(c) mixing said first sample and said second sample into a mixture;

(d) separating said mixture into a plurality of fractions;

(e) quantifying a ratio of radioactive isotopes for each fraction; and,

(f) comparing the ratios of radioactive isotopes among all fractions whereby at least one fraction with deviated ratio of radioactive isotopes is identified as a result said difference is isolated.

Claim 83 (previously presented): The method of Claim 82 further comprising a step of:

isolating at least one molecule responsible for causing said deviated ratio of radioactive isotopes from said fraction with deviated ratio of radioactive isotopes.

Claim 84 (previously presented): The method of Claim 83 further comprising a step of: identifying the isolated molecule.

Claim 85 (previously presented): The method of Claim 82 further comprising a step of:

separating a fraction with normal ratio of radioactive isotopes into a plurality of sub-fractions.

Claim 86 (previously presented): The method of Claim 85 further comprising a step of:

comparing the ratios of radioactive isotopes among all sub-fractions whereby at least one sub-fraction with deviated ratio of radioactive isotopes is identified.

Claim 87 (previously presented): The method of Claim 85 further comprising a step of:

comparing ratios of radioactive isotopes among all sub fractions and said all fractions whereby a sub-fraction with deviated ratio of radioactive isotopes can be identified.

Claim 88 (previously presented): The method of Claim 86 or Claim 87 further comprising a step of:

isolating at least one molecule responsible for causing said deviated ratio of radioactive isotopes in said sub-fraction with deviated ratio of radioactive isotopes.

Claim 89 (previously presented): The method of Claim 88 further comprising a step of:

identifying the isolated molecule.

Claim 90 (previously presented): A method for finding a difference between two protein samples comprising the steps of:

(a) labeling protein molecules in each sample with a unique radioactive isotope whereby one isotope is used per sample;

(b) mixing the labeled protein molecules from said two samples together into a mixture;

(c) contacting said mixture with an array;

(d) measuring a ratio of radioactive isotopes at each spot on said array; and,

(e) comparing the ratios of radioactive isotopes among a plurality of spots on said array whereby a spot with deviated ratio of radioactive isotopes can be identified.

Claim 91 (previously presented): The method of Claim 90 wherein a screen is used as a means to enable the measurement of a ratio of radioactive isotopes at each spot on said array.

Claim 92 (previously presented): The method of Claim 90 wherein the difference in half-life between the two isotopes is used as a means to enable the measurement of a ratio of said two isotopes at each spot on said array.

Claim 93 (previously presented): The method of Claims 90 further comprising a step of:

applying a magnetic field to said array to improve the resolution of radiation detected.